

Applicant here addresses only the new grounds asserted by the Examiner in the Office Action mailed April 1, 2009. Applicant does not repeat, but does not withdraw, any arguments previously made in responses to earlier office actions. Applicant notes that the Examiner treated as moot, and did not address, the arguments made in Applicant's response to the immediately prior office action. Applicant specifically does not withdraw those arguments.

### **CLAIM REJECTIONS**

Claims 33 - 34, 40-41 and 43 are rejected under 35 U.S.C. 102(b) as being anticipated by Cameron (US Patent 1,389,436).

Claims 37, 38 and 43 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cameron (US Patent 1,389,436) in view of Rodriguez (US Patent 6,428,316).

Claims 36 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cameron (US Patent 1,389,436) in view of Seyler (US Patent 4,889,327).

Claims 37 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Cameron (US Patent 1,389,436) in view of Diaz (US Patent 4,041,937).

### **Summary:**

This response shows that the Examiner's determination of equivalence between the Cameron device and Applicant's claimed cheek pouch anchor is incorrect both factually and legally. This lack of equivalence negates both the assertion of anticipation under 35 USC 102(b) and of obviousness under 35 USC 103(a). Applicant here provides an explanation of patentable distinctions between Cameron's dental retractor and Applicant's claimed cheek pouch anchor.

Distinction A. Cameron's spring arms, 5, 5, are designed to impart and receive forces through Cameron's hooks 8, 8 in plates, 7, 7, and the occlusal surfaces of a patient's teeth. By patentable distinction, Applicant's cheek pouch anchor avoids and never engages the occlusal surfaces of a user's teeth at all. The teeth-operated function of Cameron is non-equivalent to the function, manner of operation and result of Applicant's anchor. The *biting surfaces* of a patient's teeth are not part of a "user's cheek pouch" as specifically defined in Applicant's specification paragraphs [0040] and [0041]. Thus, Cameron's use of the biting surfaces of a patient's teeth is patentably distinct from Applicant's device as claimed. Applicant's claim language "user's cheek pouch" must be

fairly and reasonably construed according to the explicit definition for that phrase in Specification paragraph [0041] and illustrated in Fig. 3. A "user's cheek pouch" by definition "lies between the inner wall of one of such user's two cheeks and the cheek-adjacent side of a such user's dental arches, gums and teeth" and thus by explicit definition includes the soft tissues of the user's cheek and gums. Cameron's plates, 7, 7, with teeth-engaging hooks 8, 8, are fixed to Cameron's arms, 5, 5. "To the outer ends of arms 5 are suitably secured a pair of plates 7, 7, that are substantially L-shape in blank form and the wire forming the arms 5 is secured to the shorter member of the blank by soldering, welding, or in the way shown in Fig. 4. The opposite portions of these plates 7 are looped or bent in substantially J-shape, as seen in Fig. 3, to provide hooks 8, 8, of sufficient width and depth to permit the patient's teeth to conveniently engage them." Cameron, 2:67-77.

Distinction B. Cameron's J-shaped hooks 8, 8, fit over the occlusal surfaces of the patient's teeth. Cameron's plates 7, 7 and hooks 8, 8 thereby intrude between the biting surfaces of the patient's teeth and affirmatively prevent full closure of the patient's jaws. Applicant's anchor is incapable of holding a patient's mouth open and preventing closure of the mouth. The anchor is incapable of performing as a retractor, which is the primary function that Cameron discloses for his device. Thus, the objective functions of Applicant's claimed anchor and Cameron's device plainly are not equivalent. The Examiner fails to accord weight to explicit claim language in claims 33 and 39-43, that Applicant's cheek pouch anchor compresses "within a user's cheek pouch while a user's lips and jaws open and close". Cameron's device is specifically disclosed and claimed to affirmatively *prevent* the user's teeth and jaws from **fully** closing. "As will be seen in dotted lines in Fig. 1, the plates are so disposed by the bowing of the arms 5 that when the patient attempts to bring his or her teeth together the outer corners 10, 10, will meet and a space 11 will be left between the teeth, which will prevent the patient from damaging the work, instrument or injuring himself." Cameron, 2:89-96. Because Applicant's cheek pouch anchor does not hook over the user's teeth, a user of the cheek pouch anchor can readily, fully close the user's teeth and mouth with the cheek pouch anchor in place.

Distinction C. The expansive power of Cameron's spring arms 5, 5, is distinctively non-equivalent to Applicant's much weaker, gentler spring elements. Cameron's device is designed with the inherent power in spring arms 5, 5, to retract a patient's mouth open. The

retractive forces imparted by Cameron's spring arms 5, 5, necessarily must have a larger power to force the patient's mouth open by pressure *on the biting surfaces of the patient's teeth*. Cameron does state at 1:14-18 that his device is "somewhat flexible in its structure so that it will not rigidly hold the jaws open or separated," but the force plainly is imparted to and from the biting surfaces of the patient's teeth. Nothing in Cameron's disclosure suggests that Cameron's spring arms 5, 5, impose any substantial retractive force *on the soft tissues* of the patient's mouth, as distinguished from the hard biting surfaces of the patient's teeth. The larger power imparted to the patient's teeth by Cameron's spring arm 5, 5, is inconsistent with the much smaller forces imparted by Applicant's cheek pouch anchor to the soft tissues of a user's cheek pouch. Cameron, at 1:9-13, states, "My invention relates to surgical instruments, and has special reference to a retractor device that is particularly adapted for use by dentists for the purpose of holding a patient's mouth or jaw in open positions." Applicant's cheek pouch anchor does not hold a patient's mouth or jaw open. Applicant's cheek pouch anchor employs much smaller forces sufficient only for the cheek pouch anchor to expand itself to follow the voluntary opening of the user's jaws but not to force the jaws open. It affirmatively is inconsistent with the objective of Applicant's invention to retract a user's mouth open. Rather, Applicant's anchor is structured and claimed to be operable by the compressive power of the soft tissues of a user's cheek pouch -- which by common knowledge is inherently lesser power than the compressive power of the biting surfaces of a user's teeth.

Distinction D. In patentably distinctive contrast to Applicant's flexible resilient filament 28, Cameron's spring arms 5, 5, are not designed to be self-stabilizing within a user's cheek pouch *without anchoring to the user's teeth*. Applicant's Specification, para. [0072], p. 18, states, "In particular, it is an objective of this invention to provide an airway which can stabilize itself within a user's cheek pathway *without anchoring to a user's teeth*, thus permitting opening and closing of the user's jaws without disruption of the airway's cheek pathway positioning." There is absolutely nothing in Cameron's description and depiction of his spring arms 5, 5, that teaches or suggests (A) severing Cameron's spring arms 5, 5 from Cameron's teeth-engaging plates 7, 7 and hooks 8, 8, then (B) reducing the force imparted by the spring arms to eliminate Cameron's retraction function so that the spring arms will allow a user to comfortably open and fully close jaws, and then (C) making those severed spring arms 5, 5 **self-stabilizing** wholly **within** in a

cheek pouch without attachment to the user's teeth. The Examiner cannot properly use hindsight to read into Cameron's spring arms 5, 5 the non-retractive, self-stabilizing, teeth-avoiding structure of Applicant's cheek pouch anchor.

Distinction E. The Examiner is factually incorrect when the Examiner states, "Cameron discloses a cheek pouch anchor (fig. 1) comprising a coil spring (6) to be placed **within a user's cheek pouch** (Lines 61 - 66) that compresses as the user's jaws closes and expands as the jaw opens because the anchor (fig. 1) is a resilient spring coil." Office Action, April 1, 2009, p. 3. The Examiner again factually misstates Cameron on page 4 of the Office Action when the Examiner states, "The Cameron device is capable of being placed within a user's cheek pouch." Cameron's plates 7, 7 and hooks 8, 8 intrude between the patient's teeth and therefore necessarily project beyond the "user's cheek pouch" as defined in Applicant's specification. Cameron does not teach use of his spring arms, 5, 5, severed from Cameron's teeth-engaging hooks 8, 8. The Examiner improperly disregards Applicant's explicitly **closed**, positive limitation on structure, "sized to fit within **one of a user's cheek pouches**," stated in claims 41 - 43. Cameron's plates 7, 7 and hooks 8, 8, are essential, integral structure for Cameron's intended retractive function, and they necessarily cannot fit **within** one of a user's cheek pouches.

#### **Detailed Response.**

The Examiner has not made out a prima facie case of equivalence between Cameron's device and Applicant's device as claimed. MPEP 2183. Unless an element in prior art performs the identical function specified in Applicant's claim, that prior art cannot be an equivalent for the purposes of 35 U.S.C. 112, sixth paragraph. *MPEP 2184, II*, citing *Pennwalt Corp. v. Durand-Wayland, Inc.* 833 F.2d 931, 4 USPQ2d 1737 (Fed. Cir. 1987), cert. denied, 484 U.S. 961 (1988). Because of the several, critical, structural and functional distinctions between Cameron's device and Applicant's cheek pouch anchor that are summarized above, Cameron's device lacks substantial equivalence to Applicant's claimed device. None of Rodriguez or Diaz or Seyler cures this fundamental non-equivalence of Cameron to Applicant's cheek pouch anchor.

#### **Improper Disregard of Positive, Closed, Structural Limitation.**

The Examiner incorrectly has disregarded Applicant's explicitly **closed**, positive limitation "sized to fit within **one of a user's cheek pouches**" in new claims 41 - 43. This is

a positive physical limitation on structure that does not read on Cameron. Leal cannot perform this function in the same manner to reach the same result as Applicant discloses and claims. By patentable distinction, the size and the three-dimensional shape of Cameron's device render it impossible for Cameron's device to fit **within** only one of a user's cheek pouches. Cameron, Figs. 1 and 3.

**Examiner Improperly Avoids The Obvious Difference Between Soft Tissue of the Cheek Pocket and the Hard Biting Surfaces of a Patient's Teeth By Refusing to Give Weight to Applicant's Claim Language As Explicitly Defined in Applicant's Specification.**

First. It is the Examiner's burden to prove with valid prior art the Examiner's implied contention that the Cameron's device can be compressed by the soft tissues of a patient's mouth.

Second. Applicant's explicit definitions for language used in the claims necessarily implicate soft tissues of a user's mouth. Applicant affirmatively negates equivalence to Cameron in claims 41 - 43 by explicitly claiming:

"said spring element flexibly compresses to allow a user's jaws and lips to **fully** close while said spring element is **within** one or more of a user's cheek pouches."

Applicant's specification, paragraph [0041], states in material part:

" 'User's cheek pouch' lies between the inner wall of one of such user's two cheeks and the cheek-adjacent side of such user's dental arches, gums and teeth."

That is, Applicant's specification explicitly defines a cheek pouch to include what generically are called "soft tissues." Applicant's Figure 3, drawing feature 50, illustrates the approximate location of a cheek pouch and shows that it is the soft tissues of a user's cheek pouch that impose the compressive forces on Applicant's anchor. Of course, Applicant is not claiming that the soft tissues of a user's mouth are part of the cheek pouch anchor, but only that these soft tissues are part of the cheek pouch environment in which the anchor as claimed is capable of operating.

Claims 33, 39, and 40 also contain variants on the claim limitation that the spring element is structured to be placed within a user's cheek pouch and to compress as a user's jaws close and to maintain a bridge as a user's jaws open and close.

Plainly, Cameron does not perform the identical function specified in Applicant's

claims in substantially the same way and Cameron does not produce substantially the same results as Applicant's cheek pouch anchor. MPEP 2184, II.(A), citing *Kemco Sales, Inc. v. Control Papers Co.*, 208 F.3d 1352, 54 USPQ2d 1308 (Fed. Cir. 2000).

Applicant thus has proved that Cameron is not equivalent to Applicant's anchor as claimed. MPEP 2184.

Applicant's claimed anchor cannot hold a patient's mouth open, as Cameron's device is designed to do, because Applicant's anchor is structurally limited to be compressible by the soft tissues of a user's cheek pocket. Because Cameron states that his device is structured to hold a patient's mouth open and prevent it from fully closing, it follows as a matter of common sense that Cameron's device cannot have been structured by Cameron to permit compression solely by the tissues of a user's cheek pocket. Cameron's device and Applicant's claimed anchor are designed with structural differences to reach different results and therefore they are not equivalents.

#### **COMBINATION OF CAMERON WITH RODRIQUEZ DOES NOT SHOW OBVIOUSNESS.**

The Examiner cites Rodriquez (US Patent 6,428,316) to include a fluid conduit. Rodriquez does not show obviousness of claims 35 and 42 for four independent reasons.

First, Rodriquez does not teach how to make Cameron's device fit wholly ***within*** a single cheek pouch.

Second, Rodriquez does not teach how to make Cameron's device function without anchoring Cameron's spring arms 5, 5, to the patient's teeth with Cameron's hooks 8, 8.

Third, neither Rodriquez nor Cameron teaches how to attach a fluid conduit to a filament-type anchor that fits wholly within a cheek pouch. Rodriquez shows only how to integrate a debris trap into a dentist's hand held suction wand (figs. 1 and 2; specification 1:4-6).

Fourth, the Examiner at Office Action, p. 5, imputes to Rodriquez a teaching that does not appear in Rodriquez: "Rodriquez teaches a fluid conduit (17) that can be coupled to an anchor (fig. 1) ***by inserting it through the center of the coil spring (6)*** , and used during dental procedures." The Examiner is imputing to Rodriquez by hindsight the method that Applicant invented to attach a fluid conduit to a flexible filament which fits wholly within a cheek pouch. Applicant invented the idea depicted in Applicant's Figures 1 and 2, wherein the flexible filament is coiled through a plurality of holes in the wall of the

fluid conduit, thereby stabilizing the fluid conduit in a cheek pathway. Neither Rodriguez nor Cameron remotely suggests Applicant's technique for attaching a fluid conduit to Applicant's cheek pouch anchor.

The Examiner's hypothesis that Rodriguez's tube could be inserted "through the center of [Cameron's] coil spring (6)" does not appear to even be workable. A tube inserted "through the center of the coil (6)" would not be firmly, stably attached to the coil, but rather would simply slide out of the center of the coil spring. Compare Applicant's stabilized fixation of Applicant's fluid conduit 1 to Applicant's coiled, flexible filament 28 in Applicant's figs. 1 and 2.

In addition, when Cameron's device is inserted into a patient's mouth, the plane of the hole in the center of Cameron's coil would lie parallel to the plane of the patient's cheek wall. To pass a tube through that hole the tube would have to be inserted at some significant angle to the plane of the hole in the center of the coil and at an angle to the plane of the user's cheek wall. The angled tube then would be subject to compressive and bending forces that would tend to torque Cameron's coil out of alignment, twist or kink the tube, and cause discomfort to the patient. For these reasons, a person of ordinary skill in the art would be discouraged from putting a tube through the center of the hole in Cameron's coil.

Note that Applicant's invention places the fluid conduit in the same plane as the coiled flexible filament that forms the cheek pouch anchor, roughly parallel to the plane of the user's cheek wall. Nothing in either Cameron or Rodriguez teaches or suggests this structural configuration.

### **COMBINATION OF CAMERON WITH SEYLER DOES NOT SHOW OBVIOUSNESS.**

Seyler does not show obviousness of claims 36 and 39 for three independent reasons.

First, Seyler does not teach how to make Cameron's device fit wholly *within* a single cheek pouch.

Second, Seyler does not teach how to make Cameron's device function without anchoring Cameron's spring arms 5, 5, to the patient's teeth with Cameron's hooks 8, 8.

Third, the Examiner misstates the function of Applicant's loops. As the Examiner correctly notes, Seyler adds coils *to order to vary the force applied by the device*.

Office Action of April 1, 2009, p. 5. But this teaching of Seyler has little bearing on Applicant's invention because Applicant does not use coils to vary **the force** applied by the cheek pouch anchor. Applicant's function uses coils to vary **the size of the span** of the spring element so that the span is sufficient to bridge the gap between the occlusal surfaces of a particular user's teeth. There is relatively little need in Applicant's cheek pouch anchor to increase the force of Applicant's flexible filament. This is because the cheek pouch anchor needs only to expand itself, trailing behind but not forcing an opening of the user's jaws. Indeed, it could be seriously detrimental, not just incidental and useless, to add coils increase **the force** that Applicant's flexible filament imparts to mouth tissues. This is because excessive spring force would tend to create discomfort or pain in the soft tissues of the user's cheek and thus would introduce an undesirable retraction function into the cheek pouch anchor. Cameron's primary function, retraction, had to be eliminated from the cheek pouch anchor. Otherwise, users cannot comfortably use, and thus will refuse to use, the anchor for extended periods of time. For the same reason, use of Seyler's teaching to add coils to increase the force applied by the spring to the user's cheek pouch tissues would tend to defeat the purpose of the cheek pouch anchor.

Neither Cameron nor Seyler teaches the specific kind of adjustability that Applicant discloses and claims wherein:

"an adjustment in said range of expansion and compression of the loop span size of at least one of said plurality of connected loops [will translate] **into an adjustment in said range of expansion and compression of said whole spring element span size.**" Claim 39, last phrase. See also, Claim 36.

The kind of adjustability claimed by Applicant is not objectively disclosed in Seyler. Applicant's claimed kind of adjustability is neither **necessarily** nor reliably present in Seyler's device. The Examiner is imputing the claimed adjustability to Seyler's device by improper use of hindsight in light of the teaching of Applicant's disclosure.

The Examiner does not show how a person of ordinary skill in the art having common sense would have made an operable modification of Cameron's device with Seyler that would have rendered Cameron's device adjustable equivalently to the adjustability claimed for Applicant's anchor.

The showing the Examiner must make to demonstrate prima facie equivalence cannot be made merely by hypothesizing that one of ordinary skill would have a motivation



to make some adjustment of Cameron's device. The Examiner must go further and articulate some publication or convention in the prior art that would reliably lead one of ordinary skill specifically to a mechanically operable modification of Cameron's device to stabilize Cameron's spring arm, 5, 5, after deleting Cameron's plates 7, 7 and hooks 8, 8, and after reducing the retractive force imparted to a user's mouth by Cameron's spring arm, such that Cameron as modified would perform substantially the same function in the same manner with the same result as Applicant discloses and claims. *MPEP 2184, II*, citing *Pennwalt Corp. v. Durand-Wayland, Inc.* 833 F.2d 931, 4 USPQ2d 1737 (Fed. Cir. 1987), cert. denied, 484 U.S. 961 (1988).

### **COMBINATION OF CAMERON WITH DIAZ DOES NOT SHOW OBVIOUSNESS.**

Combination of Cameron with Diaz does not show obviousness of claims 37 and 38 for two independent reasons.

First, Diaz does not teach how to make Cameron's device fit wholly *within* a single cheek pouch.

Second, Diaz does not teach how to make Cameron's device function without anchoring Cameron's spring arms 5, 5, to the patient's teeth with Cameron's hooks 8, 8.

### **CLAIM 37 IS NOT INDEFINITE. THE "ADAPTED TO" PHRASE STATES A MANDATORY STRUCTURAL LIMITATION IN AN ARTICLE CLAIM. IT IS NOT AN OPTIONAL STEP IN A METHOD CLAIM.**

On page 3, the Office Action of April 1, 2009, states, "Claim 37 is rejected under 35 U.S.C. 112, second paragraph as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The claim fails to set forth any additional structure. Moreover, the Applicant uses the term 'improved' but fails to specify what is improved and how it is improved."

On page 6 the Office Action of April 1, 2009, also states, "The adapted to language of claim 1 does not further limit the particular structure claimed. It merely lists the steps the device should optionally be able to perform. See MPEP 2111.04[R-3]" Applicant infers that the "claim 1" reference is a typographical error. Due to the placement of the statement in the Office Action, Applicant infers that the Examiner's intended reference was to claim 37.

A capability “to receive impregnation or coating with a substance which is to be released” plainly is a limiting structural condition. This is a structural limitation because not all structures have this capability. For example, some surfaces, such as stainless steel and certain plastic are relatively impermeable and impervious and so do not readily lend themselves to impregnation or coating.

Applicant previously has acknowledged that numerous ways were known in the prior art to render an article capable of impregnation or coating with a substance to be released into a user’s mouth. Diaz (US Patent 4,041,937) is only one of many ways to achieve impregnation or coating. Claim 37 envisions a distinct category of use of the cheek pouch anchor as a self-stabilizing delivery vehicle dwelling in the cheek pouch while the user retains unrestricted opening and closing of jaws and lips. Applicant acknowledges that the novelty in Claim 37 lies in the cheek pouch anchor itself, and the combination of the cheek pouch anchor with an impregnated or coated substance, but not solely in the technique of impregnation or coating an article to release a substance in the mouth.

MPEP 2111.04[R-3] addresses method claims which include “steps”. Applicant’s Claim 37 is an article claim, not a method claim, and does not contain “steps”. As *Hoeffer v. Microsoft Corp.*, 405 F. 3d 1326, 1329, 74 USPQ2D 1481 (Fed. Cir. 2005) [cited in MPEP 2111.04] ruled, a condition that is material to patentability cannot be ignored in order to change the substance of the invention. Here, the capacity of the cheek pouch anchor to receive impregnation or coating is a mandatory structural condition of Claim 37, not an optional method step.

### **THE EXAMINER’S NEW NON-PERTINENT CITATIONS ACTUALLY CORROBORATE THE NOVELTY OF APPLICANT’S INVENTION.**

The Office Action of April 1, 2009 cites as new, non-pertinent art Fehrman (US Patent 2,651,300) and Taljaard (US Patent Application Publication 2005/0252514).

Significantly, Fehrman’s application was filed in 1951, some 52 years before Applicant filed in 2003. Taljaard’s foreign application priority date is July 5, 2002, only some 17 months before Applicant filed on November 17, 2003. This long stretch of time is very significant because both Fehrman and Taljaard, as well as Cameron, used teeth attachments **outside** of the cheek pouch to stabilize a spring arm. All three of them also

designed retractors. None of them taught how to stabilize a spring arm that was free-floating in the cheek pouch without any attachment to teeth. None of them taught how to use the spring arm as an anchor with the retractive function eliminated. None of them taught how to structure the spring arm to expand itself across the inter-occlusal gap in the user's teeth while avoiding any retractive effect, avoiding the occlusal surfaces of the teeth, and permitting the jaw to open and to **fully** close without any obstruction of the occlusal surfaces of the teeth. This is the closest art that has been found after Applicant's own extensive art citations filed concurrently with the Application, and after the Examiner has searched repeatedly for seven years. Applicant still believes that the closest art is the Nelson airways, US Patents 4,170,230, 4,261,354, 4,262,666 and 4,289,127, cited in Applicant's specification. This extensive list of old and modern art affirmatively negates the Examiner's unsupported speculation that one of ordinary skill in the art would have known how to make and use Applicant's cheek pouch anchor device.

### **SUMMARY**

Applicant respectfully submits that the rejections of claims 33-43 should be withdrawn and those claims should be allowed. New claims 44 - 46 also should be allowed.

### **AMENDMENT**

Applicant hereby proffers additional claims by amendment:

Claim 44. (new): The cheek pouch anchor of claim 33, improved to dispense a substance within a user's mouth, further comprising:

said spring element is joined with the substance which is to be released in a user's mouth.

Claim 45. (new) The cheek pouch anchor of claim 35 further comprising:

said fluid conduit has a conduit wall,

said conduit wall has at least one hole, and

said cheek pouch anchor is joined to said fluid conduit by lacing the spring element of said cheek pouch anchor through at least one hole in said conduit wall.

Claim 46. (new) A cheek pouch anchor for placement within a user's cheek pouch to maintain positioning of a work piece in a user's mouth while a user's jaws, inter occlusal space between a user's teeth, and lips open and close, comprising:

Spring means that fit wholly within a user's cheek pouch, and

Joinder means that fit wholly within such user's cheek pouch for attaching a work piece to said spring means.

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